IN THE CLAIMS:

Please amend claims 1, 2 and 4 as follows. A detailed listing of all claims is as follows.

Claim 1 (Currently Amended): A process of forming opto-via holes, comprising:

forming a plurality of via holes in a plurality of copper clad laminates using a drill;

plating an inner wall of each of the via holes;

exposing and etching plated portions of an upper side and a lower side of each copper clad laminate to form a circuit pattern on the upper and lower sides of the copper clad laminate;

layering the patterned copper clad laminates on each other using an insulating resin adhesive, the insulating resin filling a space between the copper clad laminates and a portion of the via holes; [[and]]

removing the insulating resin adhesive from the ~~predetermined~~ via holes ~~to form opto-via holes~~; and

forming an optical waveguide in the vicinity of the via holes to form the opto-via holes.

Claim 2 (Currently Amended): [[The]] A process ~~as set forth in claim 1~~ of forming opto-via holes, comprising:

forming a plurality of via holes in a plurality of copper clad laminates using a drill;

plating an inner wall of each of the via holes;

exposing and etching plated portions of an upper side and a lower side of each copper clad laminate to form a circuit pattern on the upper and lower sides of the copper clad laminate;

layering the patterned copper clad laminates on each other using an insulating resin adhesive, the insulating resin filling a space between the copper clad laminates and a portion of the via holes; and

removing the insulating resin adhesive from the via holes to form opto-via holes, wherein the opto-via holes comprise electric-via holes and opto-via holes.

Claim 3 (Original): The process as set forth in claim 1, wherein the opto-via holes are formed by a CO_2 laser beam or a mechanical bit in the removing step.

Claim 4 (Currently Amended): [[The]] A process ~~as set forth in claim 1~~ of forming opto-via holes, comprising:

forming a plurality of via holes in a plurality of copper clad laminates using a drill;

plating an inner wall of each of the via holes;

exposing and etching plated portions of an upper side and a lower side of each copper clad laminate to form a circuit pattern on the upper and lower sides of the copper clad laminate;

layering the patterned copper clad laminates on each other using an insulating resin adhesive, the insulating resin filling a space between the copper clad laminates and a portion of the via holes; and

removing the insulating resin adhesive from the via holes to form opto-via holes, wherein an epoxy resin with 95% or more light transmissivity is filled in the opto-via holes.

Claim 5 (Previously Presented): A process of forming opto-via holes for optical waveguides, comprising:

forming a first circuit pattern on a first copper clad laminate, said first copper clad laminate including an insulating layer and copper-clad layers coated on an upper side and a lower side of the insulating layer;

layering copper layers on the first patterned copper clad laminate using an adhesive;

drilling a plurality of electric- and first opto-via holes in the first layered copper clad laminate;

plating inner walls of the drilled electric- and first opto-via holes;

exposing and etching plated portions of an upper side and a lower side of the first layered copper clad laminate to form a second circuit pattern on the upper and lower sides of the first layered copper clad laminate; and

drilling a plurality of second opto-via holes in the first layered copper clad laminate after the second circuit pattern is formed on the upper and lower sides of the first layered copper clad laminate.

Claim 6 (Original): The process as set forth in claim 5, further comprising forming a stepped part in the vicinity of each of the first and second opto-via holes and attaching an optical waveguide to the stepped part.

Claim 7 (Original): The process as set forth in claim 5, wherein an epoxy resin with 95% or more light transmissivity is filled in the first and second opto-via holes.

Claim 8 (Previously Presented): A printed circuit board with opto-via holes for optical waveguides, comprising:

a plurality of copper clad laminates with a plurality of via holes formed by a drill;

a plated layer formed on an inner wall of each of the via holes;

a circuit pattern layer formed by exposing and etching plated portions on an upper side and a lower side of each of the copper clad laminates;

an insulating resin adhesive used to layer the patterned copper clad laminates on each other;

a plurality of opto-via holes formed by removing the insulating resin adhesive from the via holes; and

an optical waveguide positioned such that an optical signal through each of the opto-via holes can be obtained.

Claim 9 (Original): The printed circuit board as set forth in claim 8, wherein the opto-via holes comprise electric-via holes and opto-via holes.

Claim 10 (Original): The printed circuit board as set forth in claim 8, wherein the opto-via holes are formed by a CO_2 laser beam or a mechanical bit.

Claim 11 (Original): The printed circuit board as set forth in claim 8, wherein an epoxy resin with 95% or more light transmissivity is filled in the opto-via holes.

Claim 12 (Previously Presented): A printed circuit board with opto-via holes for optical waveguides, comprising:

a first copper clad laminate with an insulating layer and copper layers coated on an upper side and a lower side of the insulating layer, said first copper clad laminate including a circuit pattern formed thereon;

an adhesive used to layer copper layers on the first copper clad laminate;

a plurality of electric-via holes formed by drilling the first layered copper clad laminate;

a plurality of first opto-via holes formed at the same time as the drilling of the electric-via holes;

a plated layer formed on an inner wall of each of the electric-via holes and the first opto-via holes;

a first circuit pattern layer formed by exposing and etching the plated portions on an upper side and a lower side of the first layered copper clad laminate;

a plurality of second opto-via holes formed by drilling desired points on the first layered copper clad laminate after the first circuit pattern layer is formed; and

an optical waveguide positioned such that an optical signal can be obtained through each of the first and second opto-via holes.

Claim 13 (Original): The printed circuit board as set forth in claim 12, wherein an epoxy resin with 95% or more light transmissivity is filled in the second opto-via holes.

Claim 14 (Previously Presented): The process as set forth in claim 5, further comprising:

forming a plurality of second via holes in a plurality of second copper clad laminates using a drill;

plating an inner wall of each of the second via holes;

exposing and etching plated portions of an upper side and a lower side of each of the second copper clad laminates to form a third circuit pattern on the upper and lower sides of the second copper clad laminates;

layering the second patterned copper clad laminates on each other using an insulating resin adhesive, the insulating resin filling a space between the second copper clad laminates and a portion of the second via holes;

removing the insulating resin adhesive from the second via holes to form third opto-via holes in the second layered copper clad laminates; and

layering the first layered copper clad laminate on the second layered copper clad laminates after the third opto-via holes are formed.

Claim 15 (Previously Presented): The printed circuit board as set forth in claim 12, further comprising:

a plurality of second copper clad laminates with a plurality of second via holes formed by a drill;

a second plated layer formed on an inner wall of each of the second via holes;

a second circuit pattern layer formed by exposing and etching plated portions on an upper side and a lower side of each of the second copper clad laminates;

an insulating resin adhesive used to layer the second patterned copper clad laminates on each other; and

a plurality of third opto-via holes formed in the second layered copper clad laminates by removing the insulating resin adhesive from the second via holes, the second layered copper clad laminates being layered on the first layered copper clad laminate after the third opto-via holes are formed.